

1. Use Case: A researcher would like to perform a study to compare the type of cancer treated with a particular chemotherapeutic agent, involved in clinical trials, in which the study subjects lived longer than 2 years post-study to find gene expression patterns that might be predictive of a positive outcome. The researcher has expression data (Affy) for patients that lived less than two years.

Query: I want to collect all microarray data (Affy only) available from all cancer centers from patients with bladder or ovarian cancer that were part of any clinical trial protocol using cisplatin within the past five years. In addition, I want to know all available tissue samples, cancerous and non-cancerous (normal) tissue localized within 10mm of tumor site from this patient group such that I can perform Affy gene expression studies to include with previously performed studies that were identified by the query. Finally, I need all severe adverse events for the group of patients identified that had a severity rating of 3-4 and are likely linked to cisplatin administration.

[impacts clinical trials, ICR and tumor bank domain workspaces]

2. Use Case: A research would like to study the error rate in pathological diagnoses of solid tumor samples and compare numerous molecular diagnostic approaches to determine if the molecular diagnostic approach can enhance the accuracy of pathological diagnoses.

Query: I want all solid tumors, specifically for lung cancer, that have a diagnosis based on tumor pathology. Each diagnosis must have an image of the tumor that allows for independent verification of diagnoses. Each record retrieved must also have either proteomics marker data or microarray data (Affy or two-color) included so that different molecular techniques can be correlated to the tumor pathology. In addition, I want all protein annotations for markers and genes associated with the proteomics and microarray data so I can perform meta-analyses.

[impacts ICR and tumor bank domain workspaces]

3. Use Case: A researcher would like to know all cancer patients that have been involved in multiple clinical trials to determine if certain cancer treatments have a higher incidence of future cancer occurrences.

Query: I want to retrieve a dataset for all patients that have been in at least two clinical trials at any cancer center throughout the US that had two separate cancer diagnoses (not the same cancer diagnosed twice, but two different cancers). I also need a comprehensive treatment history for each patient. If treatment history is not complete, do not want patient included in dataset.

[impacts clinical trials]